

## **ABSTRACT OF THE DISCLOSURE**

### **IMAGE PROCESSING METHOD**

5           Image processing method comprises providing an original image as a matrix of  
discreet picture elements, splitting the original image into  $n$  frequency channels, each channel  
being presented by an image matrix of the same size as the original image, detecting edges,  
and assembling an output (enhanced) image from the  $n$  frequency channels, the assembling  
taking the detected edges into account. The  $n$  frequency channels are represented by a low  
10 frequency channel and  $n-1$  high frequency channels while splitting the original image into  
frequency channels, and the edge detection is performed by calculating a correlation value  
between processed pixel and its neighboring pixels in each of  $n-1$  selected high channels  
followed by comparing the correlation value with that for the corresponding pixels in other  
high frequency channels and with the threshold value for this channel. Based on the results of  
15 the comparison, weighting coefficients are formed for each pixel of each of the  $n-1$  high  
frequency channels, and the assembling of the output image is made by summing each pixel  
from the low frequency channel with all products of the corresponding (by their location in the  
image) pixels of  $n-1$  high frequency channels by their weighting coefficients. The method  
enhances image sharpness and contrast in conjunction with simultaneous noise suppression.